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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,135	12/31/2003	Steven Bernard	3659-78	6862

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EXAMINER

KIM, SUN U

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/748,135

Applicant(s)

BERNARD ET AL.

Examiner

John Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 1, 7, 15 and 17 are objected to because of the following informalities: “insider diameter” on line 19 of claim 1 should be corrected to “inside diameter”. “said cap” on line 19 of claim 7 should be corrected to “said filter header cap” to avoid confusion with a filter housing cap. “the housing” on lines 22-23 of claim 7 should be corrected to “the filter housing”. “the stem outside diameter” on lines 23-24 of claim 7 should be corrected to “an outside diameter of the stem”. “filter cap” on line 2 of claim 15 should be corrected to “filter housing cap”. “the housing” on line 19 of claim 17 should be corrected to “the filter housing”.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7-14 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the filter header cap is sealed to the filter housing cap.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 5-6 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Geel et al (US Pat. No. 4,414,110). Regarding claim 1, Geel et al teach a filter comprising a bundle (26) of hollow fibers (27) arranged in a tubular housing and having an end section (30) encased in a potting material and an end surface (34) with open ends of the fibers throughout the end face

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(34) and a side surface generally perpendicular to the end surface (34), a filter header cap (44) having an inlet (16) connectable to a blood line and an open end sealed around a side surface of the end section of the bundle (26) of hollow fibers (27) wherein the open end of the cap includes a tapered cap side surface (80) generally parallel to the side surface of the end section (30) of the potting material wherein the side surface of the end section (30) abuts a cap side surface (80) and the side surface of the end section (30) and the cap side surface (80) are tapered at the abutment and a housing including chamber (12, 14) and a first end to receive the filter header cap (44) and a second end having an outlet connectable to a blood line wherein an outside diameter of the end section (30) is substantially narrower than an inside diameter of the flared out chamber at the end of the housing (see figures 1-3, 5-7; col. 4, lines 26-62; col. 5, lines 4-25; col. 6, lines 52-68; col. 7, line 53 – col. 8, line 40). Regarding claim 2, Geel et al show that the inlet (16) is coaxial with the filter (see figure 5). Regarding claim 5, Geel et al show that the end section is an end of a stem (30) of the bundle extending outwardly from a disk of the potting material (32) (see figure 5; col. 5, lines 3-10). Regarding claim 6, Geel et al show that the disk of the potting material (30) is fitted into the cap (44) and the cap (44) is mounted on the cylindrical tube housing the bundle (26) (see figures 3, 5). Regarding claim 16, Geel et al teach a filter comprising a bundle (26) of hollow fibers (27) arranged in a tubular housing and having an end section (30) encased in a potting material and an end surface (34) with open ends of the fibers throughout the end face (34) and a side surface generally perpendicular to the end surface (34), the potting material includes a stem (30) extending outward from a disk (32) of the potting material, the stem (30) including an end section (30) of the bundle (16) of hollow fibers (27) and the disk (32) having a substantially larger cross-sectional area than the stem (30), a filter header cap (44) having an

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inlet (16) connectable to a blood line and an open end sealed around a side surface of the end section of the bundle (26) of hollow fibers (27) wherein the open end of the cap includes a tapered cap side surface (80) generally parallel to the side surface of the end section (30) of the potting material wherein the side surface of the end section (30) abuts a cap side surface (80) and the side surface of the end section (30) and the cap side surface (80) are tapered at the abutment and a housing including chamber (12, 14) and a first end to receive the disk (32) of the potting material and a second end having an outlet connectable to a blood line wherein the disk (32) of potting material is a ring (see area near 74 in figure 5) around the bundle (26) of hollow fibers (27) and is substantially devoid of fibers (see figures 1-3, 5-7; col. 4, lines 26-62; col. 5, lines 4-25; col. 6, lines 52-68; col. 7, line 53 – col. 8, line 40).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geel et al.

Geel et al teach the filter as described in above paragraph 5. Geel et al shows that rim area of the potting material is devoid of the open ends of the fibers (see area near 74 in figure 5). Claims 3-4 essentially differ from the filter of Geel et al in reciting that the end surface includes a rim area of potting material having a width no greater than on average than 0.508 mm. The rim area of the potting material of Geel et al provides a wall (30) surrounding the bundle of hollow fibers fitted in a housing (see figure 3; col. 5, lines 3-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the width of wall i.e. rim

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area of the potting material in the filter of Geel et al to be supported in a housing, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

8. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 7-14 and 17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

10. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art of record teaches or suggests a separate filter housing cap at a first end of the housing wherein the disk of the potting material is sealed to the filter housing cap in addition to filter header cap abutting and sealing side surface of a stem of fibers and potting material extending from a disk of the potting material and a filter housing through which extends a bundle of hollow fibers.

11. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new grounds of rejection. Applicants argue that the wide mouth end section of the fiber bundle of in Geel et al has a larger diameter than the housing and teach away from the present invention in which the end section (stem) of the fiber bundle is narrower than the housing for the fibers of the filter. However, Geel et al teach that an outside diameter of the end section (30) is substantially narrower than an inside diameter of the chamber in the housing (see inside diameter of the housing near "74" in figure.5) as claimed in claim 1. Applicants argue that Geel

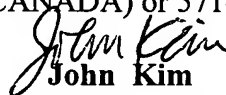
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et al does not show a potting material base having a ring of potting material that is substantially devoid of fibers and the stem of fibers extending from the potting material base. However, Geel et al teach a potting material base having a ring of potting material (32) (see area near "74" in figure 5) that is substantially devoid of fibers and the stem (30) of fibers extending from the potting material base (32).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is 571-272-1142. The examiner can normally be reached on Monday-Friday 7 a.m. - 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Kim
Primary Examiner
Art Unit 1723

JK
November 22, 2006